

May 25, 1965

Dr. K. D. Ofer
Eli Lilly and Company
Indianapolis 6, Indiana

Dear Dr. Ofer:

I was delighted to receive your letter of May 21 and to learn that you would be working in this country. I also appreciate your interest in the DENDRAL system. Your letter prompted me to compose a brief memorandum on the current status of the reports which should help to answer some of your questions. I am also including some relevant material, most of which will go into the report as it is printed. The system is actually much further along than you might guess from seeing what has been sent to the printer, and I would like to encourage you if possible to spend a few days, or perhaps even a few weeks visiting here, both to go over the system in some detail and perhaps to collaborate in some of the current projects which are outlined in Memo No. 30 enclosed. I have no special constraints as far as a suitable time for such a visit is concerned, and would like to leave this to your own convenience.

I would like to stress that the system can be greatly simplified as far as the human interface is concerned, since there is no requirement for input from the human user to be in canonical form. Some of the rules are rather formidable to deal with outside the computer, and there is really no reason why they should be. On the other hand, I do not believe that the interpretation of a canonical DENDRAL formula affords any special difficulties. Quite possibly a good deal of time could be saved if a checklist of the more frequent cyclic forms were set up so that the user would not have to make so many pencil and paper constructions. However, an hour or two's conversation about these matters could, I think, be more informative, or at least more persuasive than a great deal of correspondence, and I would look forward to any possibility that you can respond to our invitation.

As I hardly need to emphasize, the connection table should form a common interface between any sets of systems whatsoever if they are in any sense complete, and I can visualize a wide number of input formats to fit the inclinations of different users. I do not propose this as an inherently desirable situation, but I wonder if we may not have to be reconciled to it. This is exactly the situation that now exists in any graphic structural representations which, despite the absence of any general conventions, still seems to be the most acceptable medium of expression and communication between chemists.

Ofer

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Whether or not you can visit us here, please let me know if there is anything else I can do to answer any of your questions or to work out any ambiguities that you may detect in these reports.

Cordially,

Joshua Lederberg
Professor of Genetics

Enclosures:

Current status of DENDRAL

Memo No. 30

Excerpts from DENDRAL II (in prep)